

Annual Report 2002 of the Environmental Finance Center Network

Environmental Finance Center Network

2002 Annual Report

California State University, Hayward EFC

The EFC at California State University focuses on Small Businesses

THE Environmental Finance Center in Region 9 (EFC) is a university-based Center working for greener communities through cleaner business, by advancing the environmental industry and promoting pollution prevention and source reduction. Our mission is four-pronged:

1. To help entrepreneurs develop and finance new and innovative environmental technologies.
2. To encourage small business to adopt source reduction and pollution prevention in the manufacturing processes.
3. To educate and encourage consumers to choose green business and green business products.

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4. To help federal, state and local governments establish the necessary tools to foster cleaner business.

To that end, working with both the private and public sectors, EFC9 pursues its mission through numerous tools including:

- Green business development
- Environmental business incubation
- Finance programs & directories
- Industry surveys & guides
- Technology transfer
- Charrettes, conferences & workshops
- Research publications and reports, and
- Hands-on assistance to small business.



Throughout the past year EFC9 has undertaken a number of new and ongoing initiatives working with both the private and public sectors. Those projects include:

- Brominated Flame Retardants and Electronics Conference and Roundtable
- Brominated Flame Retardants Website/Clearinghouse

- Brominated Flame Retardants in the US and Japan: A Policy Analysis
- Brominated Flame Retardants and Foam Furniture Initiative
- Arizona Green Business Program Launch
- US/Mexico Clean Air Investment Fund
- EFC9 Green Business Website/Clearinghouse
- Environmentally Preferred Purchasing for Services Analysis

ACCOMPLISHMENTS

Brominated Flame Retardants and Electronics Conference and Roundtable

In 2001 EFC9 and U.S. EPA Region 9 Pollution Prevention (P2) Team and the Solid Waste Section launched the Electronic Waste Initiative on Brominated Flame Retardants (BFRs). Brominated flame retardants are a class of brominated chemicals used in electronics to reduce flammability. Some of the brominated flame retardants have established adverse health effects and there is increasing concern about the levels of BFRs found in human and animal blood and tissue. In response, EFC9 and EPA Region 9 planned a two-day, multi-stakeholder Roundtable focused on brominated flame retardants and their alternatives in electronic products. The primary purpose of the meeting was to facilitate a wide and open exchange of information on the uses and potential environmental and human health impacts of, and alternatives to, brominated flame retardants in electronics.

Conference/Roundtable Overview

In September 2002, EFC9 held a 2-day Conference and Roundtable in San Francisco to examine the use of Brominated Flame Retardants (BFRs) in consumer electronics. While the day one

conference was designed to provide background information on the potential health and environmental impacts of and alternatives to BFRs, day two was devoted to exploring the question: How can we design electronics that are both fire resistant and protect human health and the environment while ensuring product performance?

The day two roundtable was divided into three morning workgroups (Science and Health, Product Design and Stakeholder Response) and an afternoon roundtable. While there was not always consensus, the following is a summary of the Next Steps and Recommendations.

Recommendations

In general the group recommended that more information is needed in all three breakout categories described below. There was also broad-based support for better public education and more complete stakeholder involvement in the decision-making process. Additionally, the lack of adequate fire statistics was troublesome to many participants, in that there was no specific data on the causes of fires with regard to electronic equipment. Other recommendations included the following.

Science and Health

This discussion evolved around the following four questions: 1) whether deca-BDE breaks down over time, 2) what are the health and environmental impacts of all PBDEs and TBBPA, 3) what are the sources and pathways for BFR chemicals in the human body and wildlife and 4) whether or not BFR chemicals could cause additional endocrine and neurotoxic effects when added to other bioaccumulative toxins such as PCBs.

Product Design and Alternatives

This group focused on the lack of adequate information to determine the health and environmental impacts of BFRs and BFR alternatives. There was strong agreement that criteria need to be developed to guide the process of alternatives development and selection to help avoid products that may present similar or other challenges in the future.

Stakeholder Response to Public Concern

The Stakeholder group argued that overall product stewardship and lifecycle analysis should be incorporated into the manufacturing process and some participants urged industry and government to adopt the precautionary principle when considering new products.

Next Steps

Day two concluded with a full roundtable session during which morning breakout groups reported their recommendations for all to consider. An overview of the proposed next steps is below.

- Have EPA Design for Environment program issue a design challenge to industry.
- EPA/Stakeholders should develop a matrix on flame retardants to identify current knowledge and gaps.
- EPA/Stakeholders should develop criteria to assess BFR alternatives.
- EPA/Stakeholders should compile results of public and private research data on flame retardants.
- EPA should share results of VCCEP peer consultation process Apr-May 2003 with hazard, risk and exposure assessments by scientists on risks to children.
- EFC9 should continue the dialogue by posting the conference presentations and other resources on EFC9's website and hosting a conference on BFRs in Furniture.

- All stakeholders should continue the dialogue at other appropriate conferences or industry meeting.

Brominated Flame Retardants Website and Clearinghouse

EFC9 has become the primary contact for information on Brominated Flame Retardants in North America. As a result, throughout the year, EFC9 continued to develop our website to not only provide basic information about the Center, but to also act as an information clearinghouse for brominated flame retardants. EFC9 has expanded available documents so that stakeholders and other interested visitors can download numerous pdf files from public, private and non-profit resources around the world. In addition, we have updated our contacts page to identify key players worldwide. We also offer the Powerpoint presentations from our BFR conference as well as the roundtable White Paper.

Brominated Flame Retardants in the US and Japan: A Policy Analysis

To augment our understanding of the interplay of public policy, consumer and environmental pressures and the use of brominated flame retardants, EFC9 is looking at how and why Japan has decided to phase out the use of BFRs in consumer products and whether that approach is applicable to the United States. Working with a UC Berkeley Public Policy Masters student from Japan, EFC9 initiated research that will culminate in a final report on BFRs and Japan in 2003. As much of the information is available only in Japanese, it was crucial to find a bilingual researcher.

The final report will include the following analysis:

- BFR Overview (including a short comparison to dioxins and PCBs);
- Japanese, US and EU status of BFRs (including an analysis of public policy and the impact of various pressure groups such as industry, environmental organizations and consumers);
- Application of Japanese approaches to the US (including a consideration of alternatives, policies and regulations and possible government actions); and
- Conclusions and recommendations.

Brominated Flame Retardants and Foam Furniture Initiative

Finally, EFC9 began our newest BFR initiative focused on the Foam Furniture Industry. As a result of strict flammability standards in California, roughly 15 percent of all furniture manufactured in the US contains BFRs both in the foam and the fabric. In addition, much of the foam is eventually recycled into carpet padding, ensuring that foam treated with BFRs persists in consumer products for the long term. In response, in 2003, EFC9 will hold a second Conference and Roundtable focused on BFRs. This second effort will focus on three key industries: chemical, foam and furniture. The conference will include panels on:

- BFR toxicology and pathways,
- Human health and persistent bioaccumulative toxins,
- NGO concerns,
- Fire safety standards and regulations in CA and the US,
- BFR manufacturers perspectives,
- Foam manufacturing and recycling perspectives, and

- Furniture manufacturers' and retailer's perspectives.

The Roundtable will focus on two major issues:

- **Alternative Flame Retardants** - Finding and evaluating alternative flame retardants for future use in polyurethane foam manufactured for the U.S. Foam Furniture and Bedding Industries; and
- **Pathways and Prevention** - Determining how BFRs get from existing foam stocks into the environment and biota, and preventing further exposures through appropriate means.

Arizona Green Business Program Launch

Since 2001, EFC9 assisted EPA Region 9 in its efforts to serve state and local governments that are searching for new approaches to improve their business assistance and P2 programs. EFC9 initiated this program by helping the State of Arizona launch their Green Business Program. EFC9 facilitated the process throughout the past two years as the State of Arizona navigated their way through a complicated process of developing their program. We also hosted numerous conference calls and acted as an information resource and clearinghouse to help Arizona explore work already accomplished by other programs within the United States.

In October 2002, the Arizona Green Business Plan was officially launched. The State has partnered with a number of trade organizations to help them engage the interest and participation of the auto industry as their first target. EFC9 will continue to track the progress of the Arizona program and provide assistance where necessary.

Clean Air Investment Fund

Partnering with the New Mexico EFC, EFC9 worked with USEPA Region 6 to help develop a Clean Air Investment Fund (similar to emissions trading) in the El Paso/Juarez/Las Cruces airshed. The project was a joint US/Mexico effort and was proposed to help reduce emissions from industry on both sides of the border.

In 2002 we participated in several meetings in El Paso, Texas and Juarez, Mexico with public and private officials to discuss the specifics of the Clean Air Investment Fund, including discussions about the regulatory framework as well as concerns and expectations for the final product. During the year the overall structure of the Fund was defined and the North American Development Bank expressed an interest in operating the Fund. However, in 2002, EFC9 contacted businesses that were seen as potential clients of the Fund and determined that interest in the CAIF was minimal. As a result, the CAIF was redesigned to accept fines, fees, donations and grants as a means to invest in low emission projects and technologies along the border. At this time, it is unclear if the CAIF will actually be implemented.

EFC9 Green Business Website/Clearinghouse

A Green Business Recognition Program (GBRP) recognizes businesses and in some cases government agencies and non-profit organizations that operate environmentally responsibly. It is a voluntary program in which the GBRP certifies applicants who comply with federal, state and local environmental regulations as well as undertake measures to conserve energy, water and other resources, and reduce pollution and waste. Some programs incorporate other goals such as implementing an Environmental Management System, demonstrating environmental leadership,

mentoring businesses, encouraging customers, suppliers and employees to make environmental improvements and engaging in social and ethical practices.

In 2002, EFC9 launched a new effort to provide comprehensive Green Business Recognition Program (GBRP) information to new and existing programs. As a result, we have added a new component to our website – an information clearinghouse for GBRPs. This website is a resource for agencies interested in planning, implementing, maintaining and/or growing GBRPs and broadly included the following topic areas.

- Planning (i.e., start-up process, program goals, needs, resources, forms, checklists and budgets)
- Implementing (i.e., administration, engaging stakeholders, advertising, partnering)
- Maintaining (i.e., long-term resources and needs, financial sustainability)
- Growing (i.e., attracting new businesses, adding new sectors, outreach)
- Examples of other Green Business Certification Programs.

Environmentally Preferred Purchasing for Services Analysis

Environmentally Preferable Purchasing (EPP) is a program that encourages and assists agencies in the purchasing of environmentally preferable products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Certified Green Businesses in the Bay Area would like to see public and private entities with existing EPPs expand their programs by offering Certified Green Businesses a bidding preference over non-green business. This Service-based EPP, or SEPP, would

provide additional incentives for new businesses to join the Green Business Program (GBP) and it would help secure the place of those already in the program.

During 2002/03, EFC9 met with ABAG and regional Bay Area Green Business Program staff to determine the feasibility and cost of establishing an Environmentally Preferred Purchasing Program for Services pilot project. Based on our discussions, we determined that a pilot SEPP project was feasible and best launched in Alameda County, the GBP with the largest number of participating businesses. The Alameda County Waste Management Authority, a key Alameda County GBP partner was very supportive of this effort but unable to provide funding.

Based on our work publicizing the SEPP concept, Alameda County General Services Agency Purchasing Department adopted policy language to support EPP for certified Green Printers in December 2002.

However, the overall process of integrating the SEPP concept into purchasing departments region-wide is a daunting task. The process would involve significant education and training for purchasing departments as well as general staff who request services from outside businesses. For a single county, it could cost at least \$10,000 for an effective and wide-ranging program. As a result, SEPP policy language is being considered as part of the overall purchasing process in some counties, but little effort is being made to provide the necessary education that should accompany such a groundbreaking program. As a result, wide-ranging success for this program is in doubt.

MAJOR NEW INITIATIVES

Brominated Flame Retardant Initiative Phase 3

The Environmental Finance Center Region 9 (EFC9), in partnership with US EPA Region 9 has

hosted successful workshops and roundtables around the emerging issue of polybrominated diphenyl ethers (PBDEs) as flame retardants in consumer products, including electronics and upholstered furniture. EFC9 plans to continue and expand the discussion to additional brominated flame retardants, including tetra-bromobisphenol A (TBBPA) and hexabromocyclododecane (HBCD) and to other consumer product uses, including carpet backing, insulation, and furniture fabric. EFC9 will partner with industry groups from stakeholder industries, including the electronics and furniture manufacturing industries, and with Commonweal, a prominent non-profit organization involved in linking environmental and public health issues at the national and international level.

With guidance from USEPA, specific tasks could include:

- Hosting an Electronics Alternatives Working Group
- Hosting a Furniture Manufacturing Alternatives Working Group (either in California or North Carolina, where furniture manufacturing is headquartered and EFC4 is located)
- TBBPA/HBCD conferences and/or roundtables.
- Identifying and characterizing additional industries that use PBDEs (either in virgin or recycled form), including their manufacturing processes and supply chains
- Developing industry-specific fact-sheets regarding PBDE use
- Maintaining and expanding our website to include industry segments
- Developing criteria by which to assess alternatives being considered in the wake of phase-out of PBDEs. These criteria could build on work already done by the electronics industry and US EPA's Design for Environment program, but expand to include issues raised by

Roundtable stakeholders, including impacts on electronics recycling and furniture manufacture.

We also propose to regularly update and educate the public and participants of past roundtables on scientific and regulatory updates in this field, from recent data on the toxicology and environmental impacts of the various brominated flame retardants to their regulatory status in the European Union and under the Stockholm Convention for Persistent Organic Pollutants.

Region 9 Green Business Program Coordination

At the request of EPA Region 9, EFC9 will assume the role of Regional Green Business Program Coordinator to promote, develop and institutionalize multimedia pollution prevention and resource conservation in Region 9 businesses while ensuring consistent growth and continuity for regional Green Business Programs. More specifically, EFC9 in partnership with the counties of San Francisco, San Diego and Sacramento as well as the Bay Area Green Business Program, CalEPA, and US EPA propose to:

- Assist start-up Green Business Programs (GBP) to help launch their programs;
- Provide basic information and presentations on the GBP throughout the Region including the annual WRPPN conference;
- Create a Region 9 Green Business Program Electronic Newsletter to inform the Region and other States about our activities;
- Help new and existing GBPs identify, establish and expand partnerships with key agencies and organizations;
- Supply technical assistance to all GBPs;
- Help create industry-specific beyond compliance checklists;
- Assist with understanding and set-up of universal measurement methods;

- Host a GBP resource website;
- Help establish regional advertising and logo; and
- Seek broad support at the state and national level for the expansion of the Green Business Program concept.

EFC NETWORK COLLABORATIONS

In 2002, EFC9 collaborated with other Centers on the following projects.

Clean Air Investment Fund – EFC Region 6

(See description of program above)

Public Management and Finance Program – EFC Region 2

Over the years, EFC9 has worked with EFC2 to help develop and launch the Public Management and Finance Program (PMFP). The PMFP is a rural communities that focuses on a variety of areas, including the range of services accessible to communities, the gaps in the delivery of technical assistance, and the disconnect between public policies and the financial and management capacity communities have.

EFC9 will continue to work with EFC2 in the coming year and we hope to establish our own PMFP program in the future.

PRESENTATIONS, CONFERENCES & MEETINGS

Western Regional Pollution Prevention Network

After the success of our first event held in 2001, EFC9 facilitated a Green Business seminar at the annual Regional Pollution Prevention Network meeting held in the fall of 2002. EFC9 brought

together Green Business leaders from throughout Region 9 to share information and learn about new and existing programs.

EFC9 also gave a presentation on Brominated Flame Retardants at this same conference.

Bay Area Pollution Prevention Group (BAPPG)

EFC9 regularly attended meetings of the Bay Area Pollution Prevention Group (BAPPG). BAPPG is a voluntary association of all Bay Area municipal wastewater treatment plants that discharge into the San Francisco Bay.

Northern CA ISO 14000 Steering Group

EFC9 attended meetings of the Northern California ISO 14001 Steering Group. This group, sponsored by DTSC provided assistance to California businesses and municipal agencies to become ISO 14001 certified.

Bay Area Hazardous Waste Reduction Committee

EFC9 is a member of the Bay Area Hazardous Waste Reduction Committee and is a regular participant in committee meetings and events.

CalEPA Department of Toxic Substances Control (DTSC) AB1916 Meetings

As part of our efforts to promote pollution prevention, EFC9 continued to attend DTSC's AB1916 meetings. These meetings focused on Assembly Bill 1916, which enabled a committee of concerned organizations to provide guidance to CalEPA's pollution prevention efforts throughout the State.

Northern California Recycling Association's Annual Meeting

In March 2002, EFC9 gave a presentation to over 200 attendees at this event on Brominated Flame Retardants and electronics.

Presentation on BFRs to the SF Commission on the Environment

In March, 2003, EFC9 gave a presentation titled "Brominated Flame Retardants in Consumer Products: An Emerging Health Concern" to the Commission on the Environment for the City and County of San Francisco